

ATV Safety Fact Sheet

January 2005

BACKGROUND

All-terrain vehicles (ATVs) are motorized vehicles with over-sized, low-pressure tires, designed for uneven surfaces and off-highway work and recreation. ATV models can weigh up to 600 pounds¹ and reach speeds up to 75 mph. Engine size ranges from 50cc to approximately 660cc. In the U.S. there is an estimated 7 million ATVs.²

ATV USE

In 2001, 97% of youth under 16 years with ATV-related injuries were operating ATVs larger than manufacturer's recommendations.³ In 2001, the estimated number of ATV operators under 16 years increased by 13% and riders by 9%.⁴ The amount of time operators under 16 years spent on ATVs increased by 19%.⁴

INJURY EXPERIENCE

Fatal Injuries

- One-third of all ATV-related fatalities (n=5,239) from 1982 to 2002 were youth under 16 years.⁵
- Central nervous system injuries accounted for 80% of fatalities in ATV-related crashes.⁶
- From 1999 to 2001, there were 698 reported fatalities to youth ages 1-19 years from off-road vehicle crashes. Off-road vehicles include ATVs, snowmobiles, and hovercraft.⁷
- Helmets may reduce risk of death by 42%.⁸

Emergency Department (ED) Treated Injuries (Estimated)

- Youth under 16 years accounted for 37% of ATV-related injury from 1985 to 2002.⁵
- From 2000 to 2002, 103,400 youth under 16 years were treated for ATV-related injuries.⁵
- ATV operators under 16 years are nearly four times more likely than ATV operators over 16 years to experience an injury requiring emergency department treatment.⁹
- From 1995 to 2003, 404,249 youth under 20 years were injured in ATV crashes and treated for nonfatal injuries in an ED.¹⁰
- Males represent approximately three-quarters (77%) of ATV-related injuries treated in an ED from 1995 to 2003.
- Eleven percent of injured ATV operators seen in an ED are admitted to a hospital. 10
- Helmets may reduce the risk of nonfatal head injury by 64%.

Cost Data

Cost is calculated by estimating medical expenditure, work lost, and loss of quality of life.

- The average annual cost of nonfatal ATV-related injuries treated in an ED for youth under 17 years is over \$1.4 billion. 11
- Hospital admitted ATV-related injuries to youth under 17 years cost over \$5.2 million annually. 11
- Nearly 80% of the average annual cost of nonfatal ATV-related injuries are associated with males. 11



ASSOCIATED FACTORS

Factors associated with ATV-related injuries for youth under 16 years.

- No helmet use 12,13,15
- Poor judgment and risk-taking behaviors^{6,14}
- Male gender^{12,13,15}
- Operating an ATV larger than that recommended for their size and age³
- Lack of physical size, strength, and coordination to operate an ATV¹⁴
- Operating three-wheeled ATVs^{2,9}
- Increased driving exposure⁴
- Operating on public roads, streets, and highways¹⁶
- Riding with a passenger¹⁵

POLICY/LEGISLATION FOR PREVENTION

The U.S. Consumer Product Safety Commission (CPSC) and ATV manufacturers signed a 10-year consent decree (1989-1998) with ATV manufacturers to cease production of three-wheeled ATVs; offer safety training; prohibit sales of adult-sized ATVs to youth; promote safety warnings; and develop voluntary ATV manufacturing standards. The proportion of youth ATV-related injury did not decrease during the consent decree. ¹⁴

ATV Action Plan

Participating manufacturers with CPSC agreed to a voluntary ATV Action Plan after the consent decree expired to:

- Not market or sell adult-sized ATVs for use by youth under 16 years
- Ban the manufacture and sale of three-wheeled ATVs
- Promote training and conduct safety education campaigns

Manufacturers can withdraw from the agreement with notice.

Recommended Legislation

The American Academy of Pediatrics recommends legislation in all states to:

- Prohibit use of four-wheeled off-road vehicles by youth under16 years
- Ban sale of three-wheeled ATVs and recall all used three-wheeled ATVs¹⁷

☐ This fact sheet can be downloaded from the Internet, www.childrenssafetynetwork.org.

ATV safety materials also available are: Safe ATV Operation: Frequently Asked Questions, ATV Safety Promoting Organizations, and ATV Safety Programs: Best Practices.

For more information:

Children's Safety Network
Phone: 800-662-6900
nccrahs@mcrf.mfldclin.edu
www.childrenssafetynetwork.org



- 1. Rodgers GB. All-terrain vehicle injury risks and the effects of regulation. Accident Analysis and Prevention. 1993 June;25(3):335-46.
- Scutchfield SB. All-terrain vehicles: Injuries and prevention. Clinical Orthopaedics and Related Research. 2003;409:61-72.
- All-terrain vehicle (ATV) safety crisis: America's children still at risk. Natural Trails and Waters Coalition and Consumer Federation of America. 2003.
- 4. Levenson MS. All-terrain vehicle 2001 injury and exposure studies. U.S. Consumer Product Safety Commission. 2003.
- Annual Report: All-terrain vehicle (ATV)-related deaths and injuries. U.S. Consumer Product Safety Commission. 2002.
- 6. Carr AM, Bailes JE, Helmkamp JC, Miele VJ, Rosen CL. Neurological injury and death in all-terrain vehicle crashes in West Virginia: A 10-year retrospective review. Neurosurgery. 2004 Apr;54(4):861-6.
- Center for Disease Control WONDER. Compressed Mortality Data. Retrieved Nov. 5, 2004, from http://wonder.cdc.gov/welcome.html
- 8. Bratton SL, Keenan HT. All-terrain vehicle legislation for children: A comparison of a state with and without a helmet law. Pediatrics. 2004 Apr;113(4):330-4.
- 9. Rodgers GB, Adler P. Risk factors for all-terrain vehicle injuries: A national case-control study. American Journal of Epidemiology. 2001 June;153(11):1112-8.
- U.S. Consumer Product Safety Commission, National Electronic Injury Surveillance System (NEISS). Nonfatal ATV Injuries, US 1995-2003. Average Annual Weighted Case Counts. (Unpublished data from the Children's Safety Network Economics and Data Analysis Resource Center) Nov. 2004.
- 11. U.S. Consumer Product Safety Commission, National Electronic Injury Surveillance System (NEISS). Nonfatal ATV Injuries, US 1999-2003. Average Annual Aggregate Costs (Year 2000 Dollars). (Unpublished data from the Children's Safety Network Economics and Data Analysis Resource Center) Nov.2004.
- 12. Lister DG, Carl J, 3rd, Morgan JH, 3rd et al. Pediatric all-terrain vehicle trauma: A 5-year statewide experience. Journal of Pediatric Surgery. 1998 Jul;33(7):1081-3.
- 13. Lynch JM, Gardner MJ, Worsey J. The continuing problem of all-terrain vehicle injuries in children. Journal of Pediatric Surgery. 1998 Feb;33(2):329-32.
- 14. Murphy N, Yanchar NL. Yet more pediatric injuries associated with all-terrain vehicles: Should kids be using them? The Journal of Trauma Injury, Infection, and Critical Care. 2004 Jun;56(6):1185-90.
- 15. Bercher DL, Staley K, Turner LW, Aitken M. Pediatric injuries resulting from use of all-terrain vehicles. The Journal of Arkansas Medical Society. 2001 Apr;97(10):351-3.
- Helmkamp JC. ATV-related deaths in West Virginia: 1990-2003. The West Virginia Medical Journal. 2003 Nov-Dec;99(6):224-7.
- 17. American Academy of Pediatrics Committee on Accident and Poison Prevention. All-terrain vehicle injury prevention: Two-,Three-, and Four-Wheeled Unlicensed Motor Vehicles. Pediatrics. 2000;105;1352-4.

